

What is claimed is:

1. A toll charging system responsive to a traveling length, comprising:
a plurality of control path units installed at inlets and outlets of a
charging traffic system, each unit including a vehicle identification
5 device and a signal emitting device for transferring signals of
information about vehicles and locations of the vehicles;
a user mobile communication unit including a mobile communication
device for transferring messages comprising user's financial accounts
and the vehicles;
10 at least one mobile communication base unit including a central
processing unit for receiving messages of the control path units and
the mobile communication unit and checking the messages; and
at least one financial unit for receiving the message from the user and
then making a financial transaction for paying a toll;
15 wherein the central processing unit calculates a traveling length and a
toll according to the received location message from an inlet control
path and an outlet control path.
2. The charging system as claim in claim 1, wherein the mobile
communication device is a mobile phone.
- 20 3. The charging system as claim in claim 1, wherein the mobile
communication device further includes an actuating device for
receiving messages about the control path units for actuating the
mobile communication device.
4. The charging system as claim in claim 1, wherein the vehicle
25 identification device is a camera.
5. The charging system as claim in claim 4, wherein the vehicle
identification device includes an image identification device.
6. The charging system as claim in claim 5, wherein the mobile
communication device includes an actuating device for receiving
30 signals of the control path units and actuating the mobile
communication device.

7. The charging system as claim in claim 6, wherein messages from the mobile communication unit includes types, numbers, positions of vehicles entering into and leaving from the control path.
8. The charging system as claim in claim 7, wherein the messages from the mobile communication unit includes time.
9. The charging system as claim in claim 7, wherein the messages from the mobile communication unit includes financial accounts of users.
10. A method utilized in the charging system of claim 1, comprising the steps of:
- identifying a vehicle by a vehicle identification device in an inlet control path unit as the vehicle enters into an inlet control path and acquiring information of the vehicle;
- a signal emitting device of the inlet control path unit transferring vehicle and location information to a mobile communication base unit;
- a mobile communication device in the vehicle transferring a message of user's financial account and vehicle information for registration in a mobile communication base unit;
- a vehicle identification device in an outlet control path unit identifying the vehicle when the vehicle leaves from an outlet control path and acquiring information about the vehicle;
- a signal emitting device at the control path unit transferring information about the vehicle and locations to the mobile communication base unit;
- the mobile communication device in the vehicle again transferring a message of user's financial account and vehicle information for registration in a mobile communication base unit;
- a central processing unit in the mobile communication base unit calculating a toll responsive to received information; and
- paying the toll from the user's financial account to a financial unit.
11. The method as claim in claim 10, wherein the information of the vehicle includes a type and a number of the vehicle.

12. The method utilized in the charging system claim 3, comprising the steps of:
- identifying a vehicle by a vehicle identification device in an inlet control path unit as the vehicle enters into an inlet control path and
- 5 acquiring information of the vehicle;
- the signal emitting device of the control path unit transferring vehicle and location information to an actuating device within the vehicle;
- the actuating device actuating the mobile communication device in the vehicle for transferring a message of user's financial account and
- 10 vehicle information for registration in a mobile communication base unit;
- the vehicle identification device in an outlet control path unit identifying the vehicle when the vehicle leaves from an outlet control path and acquiring information about the vehicle;
- 15 a signal emitting device at the control path unit transferring information about the vehicle and locations to the actuating device in the vehicle;
- the actuating device actuating the mobile communication device in the vehicle again for transferring a message of user's financial account
- 20 and vehicle information for registration in a mobile communication base unit;
- a central processing unit in the mobile communication base unit calculating a toll responsive to the received information; and
- paying the toll from the user's financial account to a financial unit.
- 25 13. The method as claim in claim 12, wherein the information of the vehicle includes a type and a number of the vehicle.
14. The method as claim in claim 12, wherein after a transaction of paying tolls is complete, the central processing unit transfers a message to the mobile communication device.
- 30 15. The method as claim in claim 14, wherein the transaction message is an electronic receipt.

